

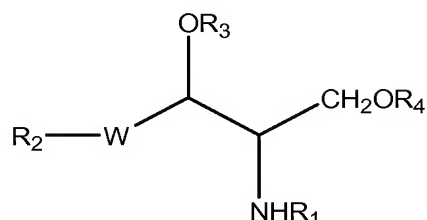
Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-29 (Cancelled).

30 (Previously Presented). A compound of formula (I):



wherein

R₁ represents a hydrogen, a branched or linear alkyl, aryl, alkylamine, or a group -C(O)**R₅**;

R₂ and **R₅** represent, independently, a branched or linear C₁₀-C₂₄ alkyl, alkenyl or polyenyl group;

R₃ and **R₄** are, independently, a group -C(O)-NR₆ **R₇**, in which **R₆** and **R₇**, being the same or different for **R₃** and **R₄**, represent, independently, a hydrogen, or a saturated or unsaturated branched or linear polyalkylamine, wherein one or more amine units in said polyalkylamine may be a quaternary ammonium; or **R₃** is a hydrogen; or **R₃** and **R₄** form, together with the oxygen atoms to which they are bound, a heterocyclic ring

comprising $-C(O)-NR_9-[R_8-NR_9]_m-C(O)-$, in which **R₈** represents a saturated or unsaturated C₁-C₄ alkyl and **R₉** represents a hydrogen or a polyalkylamine of the formula $-[R_8-NR_9]_n-$, wherein said R₉ or each alkylamine unit R₈NR₉ may be the same or different in said polyalkylamine; and **n** and **m** represent, independently, an integer from 1 to 10; and

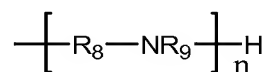
W represents $-CH=CH-$, $-CH_2-CH(OH)-$ or $-CH_2-CH_2-$.

31 (Previously Presented). The compound of Claim 30, wherein R₁ represents a $-C(O)R_5$ group, R₅ being as defined.

32 (Previously Presented). The compound of Claim 30, wherein said R₂ and R₅ represent, independently, a linear or branched C₁₂-C₁₈ alkyl or alkenyl group.

33 (Previously Presented). The compound of Claim 30, wherein W represents $-CH=CH-$.

34 (Previously Presented). The compound of Claim 30, wherein **R₁** represents a $-C(O)R_5$ group; **R₅** represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **W** represents $-CH=CH-$; **R₂** represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **R₃** and **R₄** represent, independently, a group $-C(O)-NR_6R_7$, and **R₃** may also represent a hydrogen, wherein **R₆** and **R₇** represent, independently, a hydrogen or a polyalkylamine having the general formula (II):



wherein

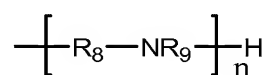
R₈ represent a C₁-C₄ alkyl;

R₉ represents a hydrogen or a polyalkylamine branch of formula (II), said **R₈** and **R₉** may be the same or different for each alkylamine unit, -**R₈**NR₉-, in the polyalkylamine of formula (II); and

n represents an integer from 3 to 6.

35 (Previously Presented). The compound of Claim 34, wherein **R₃** is a hydrogen atom.

36 (Previously Presented). The compound of Claim 30, wherein **R₁** represents a -C(O)**R₅** group; **R₅** represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **W** represents -CH=CH-; **R₂** represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **R₃** and **R₄** represent, independently, a group -C(O)-NR₆R₇, wherein **R₆** and **R₇** represent, independently, an alkylamine or a polyalkylamine having the general formula (II):



wherein

R₈ represents a C₁-C₄ alkyl;

R₉ represents a hydrogen or a polyalkylamine branch of formula (II), said **R₈** and **R₉** may be the same or different for each alkylamine unit, -**R₈**NR₉-, in the polyalkylamine of formula (II); and

n represents an integer from 3 to 6.

37 (Previously Presented). The compound of Claim 30, wherein **R₁** represents a -C(O)R₅ group; R₅ represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **W** represents -CH=CH-; **R₂** represents a C₁₂-C₁₈ linear or branched alkyl or alkenyl; **R₃** and **R₄** form, together with the oxygen atoms to which they are bonded, a heterocyclic ring comprising -C(O)-[NH-R₈]_n-NH-C(O)-,

wherein

R₈ represents a C₁-C₄ alkyl, wherein for each alkylamine unit having the formula -NH-R₈-, said R₈ may be the same or different; and

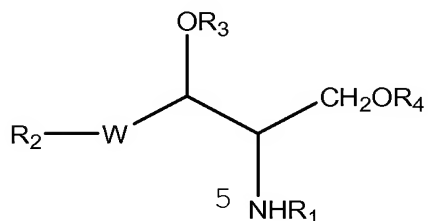
n represents an integer from 3 to 6.

38 (Previously Presented). The compound of Claim 30, wherein said R₈ is a C₃-C₄ alkyl.

39 (Previously Presented). The compound of Claim 30, being N-palmitoyl D-erythro sphingosyl-1-carbamoyl spermine.

40 (Cancelled).

41 (Currently Amended). A process for the preparation of a sphingoid-polyalkylamine conjugate of formula (I)



wherein

R₁ represents a hydrogen, a branched or linear alkyl, aryl, alkylamine, or a group -C(O)R₅;

R₂ and **R₅** represent, independently, a branched or linear C₁₀-C₂₄ alkyl, alkenyl or polyenyl group;

R₃ and **R₄** are, independently, a group -C(O)-NR₆R₇, in which **R₆** and **R₇**, being the same or different for **R₃** and **R₄**, represent, independently, a hydrogen or a saturated or unsaturated branched or linear polyalkylamine, wherein one or more amine units in said polyalkylamine may be a quaternary ammonium; or **R₃** and **R₄** form together with the oxygen atoms to which they are bound a heterocyclic ring comprising -C(O)-NR₉-[R₈-NR₉]_m-C(O)-, in which **R₈** represents a saturated or unsaturated C₁-C₄ alkyl and **R₉** represents a hydrogen or a polyalkylamine of the formula -[R₈-NR₉]_n-, wherein said R₉ or each alkylamine unit R₈NR₉ may be the same or different in said polyalkylamine; and **n** and **m** represent, independently, an integer from 1 to 10; and

W represents -CH=CH-, -CH₂-CH(OH)- or -CH₂-CH₂-;

the process comprising:

(a) providing a sphingoid compound of formula (I)

wherein **R₁**, **R₂** and **W** have the meaning as defined above and **R₃** and **R₄** represent, independently, a hydrogen atom or an oxo

protecting group, wherein at least one of said R_3 and R_4 represent a hydrogen atom;

(b) reacting said compound of step (a) with an agent for activating the hydroxyl moieties of OR_3 and/or OR_4 , said activating agent being selected from the group consisting of N,N'-disuccinimidylcarbonate, di- or tri-phosgene and an imidazole derivative, optionally in the presence of a catalyst, to obtain an activated OR_3 and/or OR_4 group;

(c) reacting said activated sphingoid compound with a polyalkylamine; and

(d) removing said protecting group, thereby obtaining said sphingoid-polyalkylamine conjugate of formula (I) as defined above.

42 (Previously Presented). The process of Claim 41, wherein said sphingoid-polyalkylamine conjugate is N-palmitoyl D-erythro sphingosyl-1-carbamoyl spermine.

43 (Previously Presented). The process of Claim 41, wherein said protecting group is a primary amine protecting group selected from the group consisting of trifluoroacetamide, fmoc, carbobenzoxy (CBZ), and dialkyl phosphoramidates.

44 (Cancelled).

45 (Previously Presented). The process of Claim 41, wherein said activation is performed in the presence of a

catalyst, the catalyst being 4-dimethylamino pyridine (DMAP), tetrazole, dicyanoimidazole or diisopropylethylamine.

46 (Previously Presented). The process of Claim 41, for obtaining a di-substituted sphingoid-polyalkylamine conjugate, wherein

in step (a) both R_3 and R_4 are hydrogen atoms, and said process comprises reacting the compound of formula (I) with at least two equivalents of polyalkylamine to obtain a disubstituted sphingoid-polyalkylamine conjugate, with identical polyalkylamine substituents.

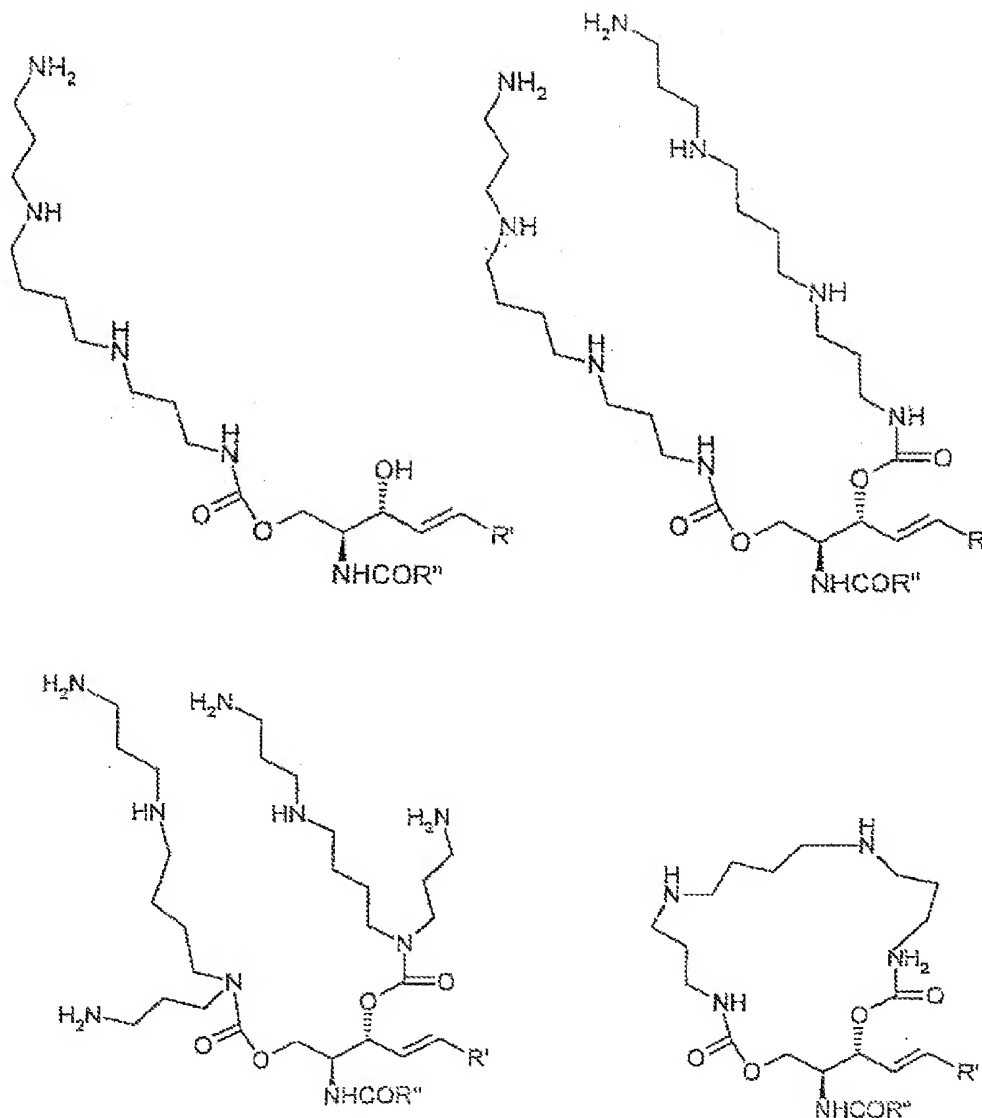
47 (Currently Amended). The process of Claim 41, for obtaining a di-substituted sphingoid-polyalkylamine conjugate, wherein

in step (a) at least one of R_3 or R_4 is protected with a protecting group, the process comprises reacting in step (c) the activated sphingoid compound with a first polyalkylamine; removing the protecting group of R_3 or R_4 to obtain an unprotected oxo group; reacting the unprotected compound with ~~an~~ a said activating agent to obtain an activated mono-substituted sphingoid-polyalkylamine conjugate; and reacting said activated mono-substituted sphingoid-polyalkylamine conjugate with a second polyalkylamine, thereby obtaining a di-substituted sphingoid-polyalkylamine conjugate, in which said first and second polyalkylamine may be the same or different.

48 (Currently Amended). The process of Claim 41, for obtaining a heterocyclic sphingoid-polyalkylamine conjugate, wherein

in step (a) both R_3 and R_4 are hydrogen atoms, said sphingoid compound is reacted with at least two equivalents of ~~an~~ a said activating agent to obtain an activated sphingoid with both R_3 and R_4 activated and reacting said activated sphingoid compound with less than an equivalent of polyalkylamine, thereby obtaining a heterocyclic sphingoid-polyalkylamine conjugate.

49 (Currently Amended). The process of Claim 41, for obtaining any one of the sphingoid-polyalkylamine conjugates as follows:



50 (Withdrawn/Currently Amended). A composition comprising a sphingoid-polyalkylamine conjugate in accordance with claim ~~20~~30, and a pharmaceutically acceptable carrier.

51 (Cancelled).

52 (Withdrawn). The composition of Claim 50, wherein said sphingoid-polyalkylamine conjugate is N-palmitoyl D-erythro sphingosyl-1-carbamoyl spermine.

53 (Withdrawn). The composition of Claim 50, further comprising a biologically active molecule.

54 (Withdrawn). In the method of capturing a molecule having a negative charge, a negative dipole or a local negative dipole with a conjugate capable of capturing said molecule by electrostatic interaction, the improvement wherein said conjugate is a compound in accordance with claim 30.

55 (Withdrawn). The method of Claim 54, wherein said compound is N-palmitoyl D-erythro sphingosyl-1-carbamoyl spermine.

56-58 (Cancelled)

59 (Previously Presented). The compound of Claim 34, wherein R_3 and R_4 represent the same or different polyalkylamine.